In the Claims

Please amend the claims as follows:

1. (currently amended) A method of monitoring a ~~flow of~~ packet-based communications traffic <u>flow</u> comprising the steps of:

    - setting a first time interval over which <u>a packet count</u> measurements ~~are~~ <u>for the monitored traffic flow is</u> to be made;

    - counting <u>a</u> number of packets flowing during that time interval;

    - using the <u>packet</u> count <u>measurement</u> to derive parameters which are indicative of the traffic <u>flow</u> meeting a sustained cell rate (SCR) requirement<u>; and</u>

    <u>- comparing the derived parameters indicative of the traffic flow meeting a sustained cell rate (SCR) requirement with at least one parameter indicative of available traffic flow capacity to derive a new congestion state for a source of said monitored traffic flow from a set of determined congestion states, each of said determined congestion states mapping to a respective operational state of said traffic flow source.</u>

2. (original) A method according to claim 1 wherein the derived parameters are: current packet rate and a running difference between the counted number of packets and an expected number of packets.

3. (currently amended) A method according to claim 2 wherein each of the derived parameters is compared with a respective parameter indicative of <u>at least one of</u> capacity on the link ~~or~~ <u>and</u> an agreed traffic contract, and the result of both <u>of said</u> comparisons is used to determine compliance with the <u>SCR</u> requirement.

4. (currently amended) A method according to claim ~~3, further comprising determining operational states for a traffic source, determining a set of congestion states, each congestion state mapping to an operational state for the source, and wherein comparison of the measured parameters with the parameters indicative of available~~

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~~capacity is used to derive a new congestion state for the source~~ <u>1 wherein it includes the steps of: translating the new congestion state derived for the traffic flow source into a corresponding one of said set of determined operational states to derive a new operational state for the traffic flow source; and applying said new operational state to said traffic flow source</u>.

5. (currently amended) A method according to ~~claim 4~~ <u>claim 1</u> wherein the new congestion state is a function of ~~the old~~ <u>a previous</u> congestion state <u>for the traffic flow source</u> and the ~~measured~~ <u>derived</u> parameters <u>indicative of said traffic flow meeting a sustained cell rate (SCR) requirement</u>.

6. (original) A method according to claim 1 wherein the first time interval is approximately 500ms.

7. (currently amended) A method according to claim 1 further comprising the steps of:

- setting a second time interval over which a second packet count measurements ~~are~~ <u>for the monitored traffic flow is</u> to be made;

- counting <u>a</u> number of packets flowing during that time interval; <u>and</u>

- using the <u>second packet</u> count <u>measurement</u> to derive a parameter which is indicative of the traffic <u>flow</u> meeting a peak cell rate (PCR) requirement.

8. (original) A method according to claim 7 wherein the second time interval is a shorter interval than the first interval.

9. (original) A method according to claim 8 wherein the second time interval is in the range 50 - 500ms.

10. (original) A method according to claim 9 wherein the second time interval is 100ms.

11 to 13 (cancelled).

14. (new) A method according to claim 7 wherein it includes the step of comparing the derived parameter indicative of the traffic flow meeting a peak cell rate (PCR)

requirement with at least one parameter indicative of available traffic flow capacity to derive a new congestion state for the traffic flow source from the set of determined congestion states.

15. (new) A method according to claim 14 wherein the new congestion state derived for the traffic flow source is a function of the new congestion state derived from the step of comparing the derived parameters indicative of the traffic flow meeting a sustained cell rate (SCR) requirement with at least one parameter indicative of available traffic flow capacity and the step of comparing the derived parameter indicative of the traffic flow meeting a peak cell rate (PCR) requirement with at least one parameter indicative of available traffic flow capacity.

16. (new) A method according to claim 15 wherein the at least one parameter indicative of available traffic flow capacity used in the step of comparing the derived parameters indicative of the traffic flow meeting a sustained cell rate (SCR) requirement with at least one parameter indicative of available traffic flow capacity is different to the at least one parameter indicative of available traffic flow capacity used in the step of comparing the derived parameter indicative of the traffic flow meeting a peak cell rate (PCR) requirement with at least one parameter indicative of available traffic flow capacity.

17. (new) A method of monitoring a packet-based communications traffic flow comprising the steps of:
   - setting a first time interval over which a packet count measurement for the monitored traffic flow is to be made;
   - counting a number of packets flowing during that time interval;
   - using the packet count measurement to derive at least one parameter which is indicative of the traffic flow meeting a cell rate (CR) requirement; and
   - comparing the derived parameter indicative of the traffic flow meeting a cell rate (CR) requirement with at least one parameter indicative of available traffic flow capacity

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to derive a new congestion state for a source of said monitored traffic flow from a set of determined congestion states, each of said determined congestion states mapping to a respective operational state of said traffic flow source.

18. (new) A method according to claim 18 wherein said cell rate requirement is at least one of sustained cell rate (SCR) and peak cell rate (PCR).

19. (new) A method according to claim 17 wherein it includes the steps of: translating the new congestion state derived for the traffic flow source into a corresponding one of said set of determined operational states to derive a new operational state for the traffic flow source; and applying said new operational state to said traffic flow source.

20. (new) A method according to claim 17 wherein it includes the steps of:
- setting a first time interval over which a first packet count measurement for the monitored traffic flow is to be made for deriving the at least one parameter which is indicative of the traffic flow meeting a sustained cell rate (SCR) requirement;
- setting a second time interval over which a second packet count measurement for the monitored traffic flow is to be made for deriving the at least one parameter which is indicative of the traffic flow meeting a peak cell rate (PCR) requirement.

21. (new) A method according to claim 20 wherein the second time interval is shorter than the first time interval.

22. (new) A method according to claim 20 wherein it includes the steps of:
- comparing the derived parameter indicative of the traffic flow meeting a sustained cell rate (SCR) requirement with at least one parameter indicative of available traffic flow capacity to derive a new SCR congestion state for the traffic flow source;

- comparing the derived parameter indicative of the traffic flow meeting a peak cell rate (PCR) requirement with at least one parameter indicative of available traffic flow capacity to derive a new PCR congestion state for the traffic flow source; and

- deriving a new overall congestion state for the traffic flow source from said new SCR and PCR congestion states.

23. (new) A method according to claim 22 wherein it includes the steps of: translating the new overall congestion state derived for the traffic flow source into a corresponding one of said set of determined operational states to derive a new operational state for the traffic flow source; and applying said new operational state to said traffic flow source.

24. (new) Apparatus for monitoring a packet-based communications traffic flow comprising:

- means for setting a time interval over which a packet count measurement for the monitored traffic flow is to be made;

- means for counting a number of packets flowing during that time interval;

- means using the packet count measurement for deriving at least one parameter which is indicative of the traffic flow meeting a cell rate (CR) requirement; and

- means for comparing the derived parameter indicative of the traffic flow meeting a cell rate (CR) requirement with at least one parameter indicative of available traffic flow capacity to derive a new congestion state for a source of said monitored traffic flow from a set of determined congestion states, each of said determined congestion states mapping to a respective operational state of said traffic flow source.

25. (new) An apparatus according to claim 24 wherein said means using the packet count measurement for deriving a parameter which is indicative of the traffic flow meeting a cell rate (CR) requirement is arranged to derive a parameter which is indicative of at least one of sustained cell rate (SCR) and peak cell rate (PCR).

26. (new) An apparatus according to claim 24 wherein means for setting a time interval is arranged to set a first time interval over which a first packet count measurement for the monitored traffic flow is to be made for deriving the at least one parameter which is indicative of the traffic flow meeting a sustained cell rate (SCR) requirement; and to set a second time interval over which a second packet count measurement for the monitored traffic flow is to be made for deriving the at least one parameter which is indicative of the traffic flow meeting a peak cell rate (PCR) requirement.

27. (new) An apparatus according to claim 26 wherein the second time interval is shorter than the first time interval.

28. (new) Apparatus for monitoring a packet-based communications traffic flow comprising a processor which performs the steps of:
 - setting a first time interval over which a packet count measurement for the monitored traffic flow is to be made;
 - counting a number of packets flowing during that time interval;
 - using the packet count measurement to derive at least one parameter which is indicative of the traffic flow meeting a cell rate (CR) requirement; and
 - comparing the derived parameter indicative of the traffic flow meeting a cell rate (CR) requirement with at least one parameter indicative of available traffic flow capacity to derive a new congestion state for a source of said monitored traffic flow from a set of determined congestion states, each of said determined congestion states mapping to a respective operational state of said traffic flow source.

29. (new) A computer-readable medium whose contents cause a processor of an apparatus for monitoring a packet-based communications traffic flow to perform the steps of:
 - setting a first time interval over which a packet count measurement for the monitored traffic flow is to be made;
 - counting a number of packets flowing during that time interval;

- using the packet count measurement to derive at least one parameter which is indicative of the traffic flow meeting a cell rate (CR) requirement; and

- comparing the derived parameter indicative of the traffic flow meeting a cell rate (CR) requirement with at least one parameter indicative of available traffic flow capacity to derive a new congestion state for a source of said monitored traffic flow from a set of determined congestion states, each of said determined congestion states mapping to a respective operational state of said traffic flow source.